LISTING OF THE CLAIMS

1. (previously presented) A process of producing coke, said method comprising the steps:

(a) obtaining a coke precursor material derived from crude oil and having a volatile organic component;

(b) subjecting said coke precursor material to a thermal cracking process, said thermal cracking process performed for sufficient time and at sufficient temperature and under sufficient pressure so as to promote the production of sponge coke;

(c) increasing porosity or improving adsorption characteristics of said sponge coke by a process means in said thermal cracking process; and

(d) adding at least one chemical compound of predetermined quality and predetermined quantity to said sponge coke in a coke quenching portion of said thermal cracking process wherein the increased porosity or improved adsorption characteristics aid in the addition of said at least one chemical compound;

whereby said at least one chemical compound substantially improves the fuel properties, combustion characteristics, or environmental impacts of said sponge coke when used in a combustion process.

2. (previously presented) A process according to claim 46 wherein said at least one

additive is about 0.5 to about 20% by weight of said coke precursor material.

3. (original) A process according to claim 2 wherein said at least one additive is about 0.5 to about 10% by weight of said coke precursor material.

4. (previously presented) A process according to claim 46 wherein said at least one additive has an oxygen content in the range of from about 5 to about 60 percent by weight.

5. (previously presented) A process according to claim 47 wherein said carbonaceous material is a cellulosic material.

6. (previously presented) A process according to claim 47 wherein said carbonaceous material is selected from the group consisting of sawdust, newspaper, alfalfa, wheat pulp, wood chips, wood fibers, wood particles, ground wood, wood flour, wood flakes, wood veneers, wood laminates, paper, cardboard, straw, cotton, rice hulls, coconut shells, peanut shells, plant fibers, bamboo fibers, palm fibers, kenaf, bagasse, sugar beet waste, coal, and lignite.

7. (previously presented) A process according to claim 47 wherein said chemical agents are selected from the group consisting of plastics, aromatic oils, cardboard, paper, and non-carbonaceous chemicals.

8. (previously presented) A process according to claim 7 wherein said plastics are selected from the group consisting of high density polyethylene, low density polyethylene, polypropylene, polystyrene, polyvinyl chloride, polyvinyl acetate,

polyacrylonitrile, polyurethane, acrylonitrile butadiene styrene (ABS), and other copolymers, plastics, and chemicals having suitable characteristics.

9. (previously presented) A process according to claim 1 wherein said coke precursor material is subjected to an efficient desalting process prior to step (b) and sodium levels are reduced to less than about 15 ppm by weight.

10. (previously presented) A process according to claim 1 wherein volatile combustible material in said coke is in the range of from about 13% to about 50% by weight.

11. (previously presented) A process according to claim 1 wherein said thermal cracking process further includes adding hydrocarbon compounds to a coke quench media to promote an increase of the VCM content of said coke to within the range of from about 13% to about 50% by weight.

12. (previously presented) A process according to claim 1 wherein said thermal cracking process is selected from the group consisting of delayed coking, fluid coking, and flexicoking.

13. (previously presented) A process according to claim 1 wherein said coke is comprised of sponge coke in an amount in the range of from about 40 to 100% by weight.

14. (previously presented) A process according to claim 1 wherein said process means further comprise adding predetermined hydrocarbon compounds to said coke precursor material to promote an increase of the VCM content of said coke to within the

range of from about 13% to about 50% by weight.

15. (previously presented) A process according to claim 1 wherein said process means further comprise adding predetermined hydrocarbon compounds to said coke precursor material which are adapted to decompose at predetermined temperatures to promote the production of sponge coke during said thermal cracking process to within the range of about 40% to 100% by weight of said coke.

16. (original) A coke made in accordance with a process according to claim 1.

17. (previously presented) A process of making coke, said process comprising:

(a) providing a coke feed comprising a material derived from carbonaceous origin;

(b) subjecting said coke feed to a thermal cracking process, said thermal cracking process incorporating a process means to promote the production of coke having increased porosity and improved adsorption characteristics; and

(c) adding at least one chemical compound of predetermined quality and predetermined quantity to said coke in a coke quenching portion of said thermal cracking process wherein the increased porosity and improved adsorption characteristics aid in the addition of said at least one chemical compound.

18. (original) A process according to claim 17 wherein said coke feed is subjected to an efficient desalting process prior to step (b) and sodium levels are reduced to less than 15 ppm by weight.

19. (previously presented) A process according to claim 17 wherein volatile combustible material in said coke is in the range of from about 13 % to about 50 % by weight.

20. (previously presented) A process according to claim 17 wherein said thermal cracking process further includes adding predetermined hydrocarbon compounds to a coke quench media to promote an increase of the VCM content of said coke to within the range of from about 13% to about 50% by weight.

21. (previously presented) A process according to claim 17 wherein said thermal cracking process is selected from the group consisting of delayed coking, fluid coking, and flexicoking.

22. (original) A process according to claim 17 wherein said coke is comprised of sponge coke in an amount in the range of from about 60 to 100% by weight.

23. (previously presented) A process according to claim 17 wherein said material derived from carbonaceous origin is derived from the group consisting of crude oil, coal, tar sands, and shale oil.

24. (previously presented) A process according to claim 17 further comprising adding predetermined hydrocarbon compounds to said coke feed to promote an increase of the VCM content of said coke to within the range of from about 13% to about 50% by weight.

25. (original) A process according to claim 17 further comprising adding predetermined

chemical agents to said coke feed which are adapted to decompose at predetermined temperatures to promote the production of sponge coke during said thermal cracking process to within the range of about 40% to 100% by weight of said coke.

26. (original) A process according to claim 17 wherein said coke feed further comprises at least one additive selected from the group consisting of carbonaceous material and chemical agents.

27. (original) A process according to claim 26 wherein said at least one additive is added to said coke feed during said thermal cracking process.

28. (original) A process according to claim 26 wherein said at least one additive is about 0.5 to about 20% by weight of said coke feed.

29. (original) A process according to claim 28 wherein said at least one additive is about 0.5 to about 10% by weight of said coke feed.

30. (original) A process according to claim 26 wherein said at least one additive has an oxygen content in the range of from about 5 to about 60 percent by weight.

31. (original) A process according to claim 26 wherein said carbonaceous material is a cellulosic material.

32. (original) A process according to claim 26 wherein said carbonaceous material is selected from the group consisting of sawdust, newspaper, alfalfa, wheat pulp, wood chips, wood fibers, wood particles, ground wood, wood flour, wood flakes, wood veneers, wood laminates, paper, cardboard, straw, cotton, rice hulls, coconut shells,

peanut shells, plant fibers, bamboo fibers, palm fibers, kenaf, bagasse, sugar beet waste, coal, and lignite.

33. (previously presented) A process according to claim 26 wherein said chemical agents are selected from the group consisting of plastics, aromatic oils, cardboard, paper, and non-carbonaceous chemicals.

34. (original) A process according to claim 33 wherein said plastics are selected from the group consisting of high density polyethylene, low density polyethylene, polypropylene, polystyrene, polyvinyl chloride, polyvinyl acetate, polyacrylonitrile, polyurethane, acrylonitrile butadiene styrene, and other copolymers, plastics, and chemicals having suitable characteristics.

35. (original) A coke made in accordance with a process according to claim 17.

36. (original) A coke made in accordance with a process according to claim 26.

37. (previously presented) A process according to claim 1 wherein said sponge coke has a surface area of about 600 square meters per gram or greater.

38. (previously presented) A process according to claim 1 wherein said at least one chemical compound is selected from the group consisting of hydrocarbons, oxygen compounds, and sulfur sorbents.

39. (previously presented) A coke made in accordance with a process according to claim 38.

40. (previously presented) A process according to claim 10 wherein said volatile

combustible material in said coke is in the range of from about 15% to about 30% by weight.

41. (previously presented) A process according to claim 17 wherein said coke has a surface area of about 600 square meters per gram or greater.

42. (previously presented) A process according to claim 17 wherein said at least one chemical compound is selected from the group consisting of hydrocarbons, oxygen compounds, and sulfur sorbents.

43. (previously presented) A coke made in accordance with a process according to claim 42.

44. (previously presented) A process according to claim 19 wherein said volatile combustible material in said coke is in the range of from about 15% to about 30% by weight.

45. (previously presented) A process according to claim 1 wherein said process means changes the crystalline structure of said coke.

46. (previously presented) A process according to claim 1 wherein said process means is selected from the group consisting of increasing thermal process quench in a coking vessel, lowering heater outlet temperature, increasing coking vessel pressure, and adding at least one additive to coke precursor material.

47. (previously presented) A process according to claim 46 wherein said at least one additive is selected from the group consisting of carbonaceous materials and chemical

agents.

48. (previously presented) A process according to claim 8 wherein said plastics are recycled without segregation of types of said plastics.

49. (previously presented) A process according to claim 8 wherein said plastics are reduced to predetermined size by shredding means and added to said coke precursor material by injection means at sufficient pressure and temperature.

50. (previously presented) A process according to claim 49 wherein said shredding means is selected from the group consisting of crushers, shredders, pulverizers, and other solids reducing devices.

51. (previously presented) A process according to claim 49 wherein said injection means is selected from the group consisting of extruders and other solids injection systems.

52. (previously presented) A process according to claim 49 wherein said injection means adds said plastics to said coke precursor material downstream of a heater in said thermal cracking process.

53. (previously presented) A process according to claim 1 wherein said at least one chemical compound is selected from the group consisting of chemical adsorbents, sulfur sorbents, hydrocarbon compounds, oxygen-containing compounds, ionizing agents, and any combination thereof.

54. (previously presented) A process according to claim 53 wherein said sulfur

sorbents are selected from the group consisting of hydrated lime, limestone, hydrated dolomitic lime, calcium compounds, magnesium compounds, sodium compounds, potassium compounds, alkali metal compounds, alkaline earth compounds, and any combination thereof.

55. (previously presented) A process according to claim 13 wherein said coke is comprised of sponge coke in an amount in the range of from about 60 to 100% by weight.

56. (previously presented) A process according to claim 1 wherein said sponge coke has sufficient porosity and sufficient physical and chemical properties to provide low to medium grades of adsorption quality carbon.